6 October 2017

ASX Release

LITHIUM TENEMENTS AND PROSPECTS

Dart Mining NL has prepared a detailed technical review of its Lithium tenements and prospects. This document represents one of a trilogy of technical reports encompassing each of Dart's commercial strategies.

"Orogenic Gold" and "Porphyries" will be released when we finish updating them in the near future.

If shareholders wish to discuss any aspect of these reports please feel to contact us.

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DART MINING

ASX Code: DTM

Key Prospects / Commodities:

GOLD

Mountain View / New Discovery - Au

Fairleys - Au

Rushworth – Phoenix - Au

Onslow – Au

Saltpetre Gap - Au

LITHIUM / TIN / TANTALUM

Glen Wills – Li-Sn-Ta

Eskdale / Mitta – Li-Sn-Ta

PORPHYRY GOLD / COPPER / MOLYBDENUM

Empress – Au-Cu

Stacey's – Au-Cu

Copper Quarry: Cu+/- Au

Gentle Annie: Cu

Morgan Porphyry: Mo-Ag-Au

Unicorn Porphyry: Mo-Cu-Ag

Investment Data:

Shares on issue: 411,485,049

Unlisted options: 1,250,000

Substantial Shareholders:

Top 20 Holdings: 43.08 %

Board & Management:

Managing Director: James Chirnside

Non-Executive Director: Luke Robinson

Non-Executive Director: Russell Simpson

Company Secretary: Julie Edwards

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Geology & Prospect Summary

Lithium – Tin – Tantalum Pegmatites

Dart Mining NL

October 2017

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Executive Summary

The inception of Dart Mining came in 2002 with the application of tenements in north eastern Victoria by the private company Dart Resources, owned by founding directors Dean Turnbull, Stephen Poke and Bernie Hochwimmer. The location of the tenements is shown in Figure 1 and Figure 2.

Dart Mining NL listed on the ASX in May of 2007 seeking to open up a new porphyry mineral province in north eastern Victoria in addition to exploring and mining the reef gold that the district was renowned for. Following early successful porphyry discoveries, the company focused all attention on the development of the Unicorn Mo – Cu – Ag porphyry deposit and related prefeasibility study. This porphyry discovery and the growing understanding of the region evolved into Li, Sn and Ta exploration in LCT pegmatites injected from fertile granites. Figure 1 simplifies and summarises Dart's current exploration target styles. These are open pit opportunities for porphyry (Mo, Cu also Zn, Ag, and Au) mineralisation, orogenic gold (reef) targets as historically mined throughout the district and a newly identified lithium province prospective for Li, Sn and Ta mineralisation in LCT pegmatites along the 50km strike of the Dorchap Dyke Swarm.

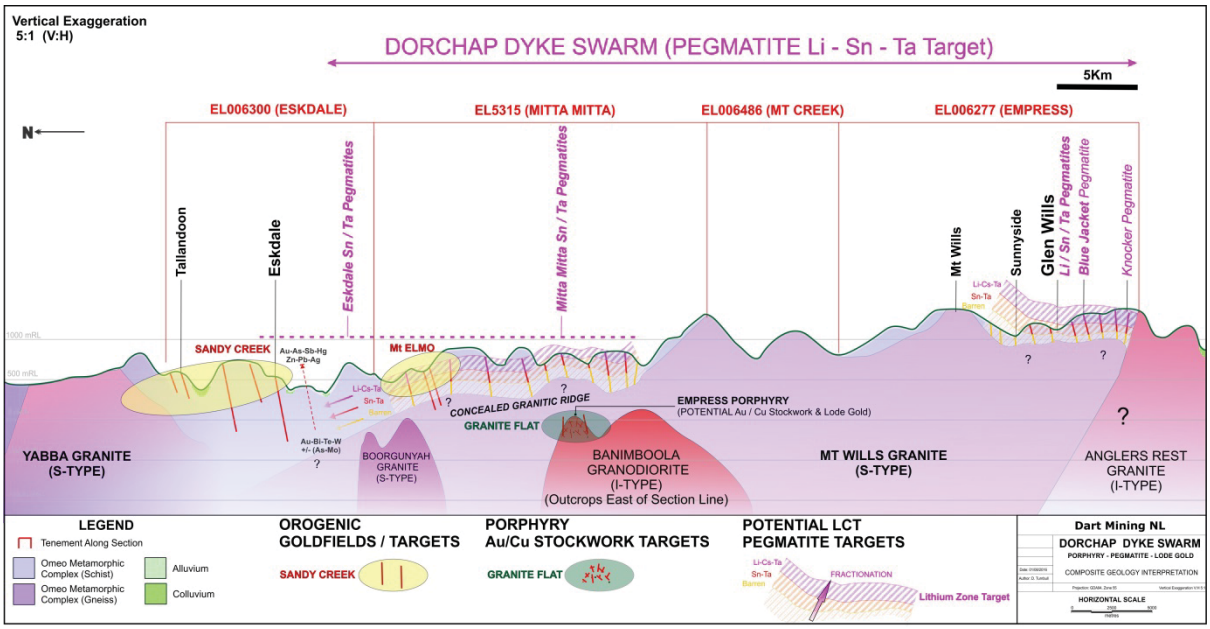

Figure 1. Simplified geological interpretation and deposit model showing examples of the three primary target types currently under exploration by Dart Mining.

Introduction – Lithium Strategy

Lithium mineralisation was first reported by Dart Mining from the southern end of the Dorchap Dyke Swarm at Glen Wills (See DTM ASX 9 August 2016) with two grab samples taken at the Blue Jacket Dyke showing results of up to 1.57% (Li_2O) and 1172ppm tantalum oxide (Ta_2O_5). Further results were reported (ASX 3 April 2017) from limited grab and rock chip sampling along the northern end of the dyke swarm (27 samples from 13 individual dykes) with up to 4m @ 1.13% (Li_2O) and 56.4ppm tantalum oxide (Ta_2O_5) at the Gosport dyke group – Eskdale. The identification of spodumene by XRD in all 7 dyke samples submitted for analysis from the northern end of the swarm has prompted the focus of initial regional exploration along the northern 40km section. The identification of spodumene in the north and lepidolite (lithium mica) and lithium phosphates at the south end of the swarm (over 50kms long) signifies a new lithium pegmatite province of significant size.

This report includes a summary of key prospects but is not a complete list. Full details of each prospect described in this report are given in individual ASX releases. The majority of the figures are from previous ASX releases. The new figures are mostly summary or explanatory diagrams. Specifically, no new drill results are used in this report, all results are taken from previous releases. This report follows an earlier version (Boucher, 2016) that includes a full review of the company history, exploration methodology and successes.

This report focuses on LCT pegmatite deposits.

Tenure

All tenements are show in **Figure 2**. Exploration tenements for the key areas are shown in **Figure 3**. Tenement status is shown in **Table *1***, including the MIN at Mountain View and three MIN's at Rushworth.

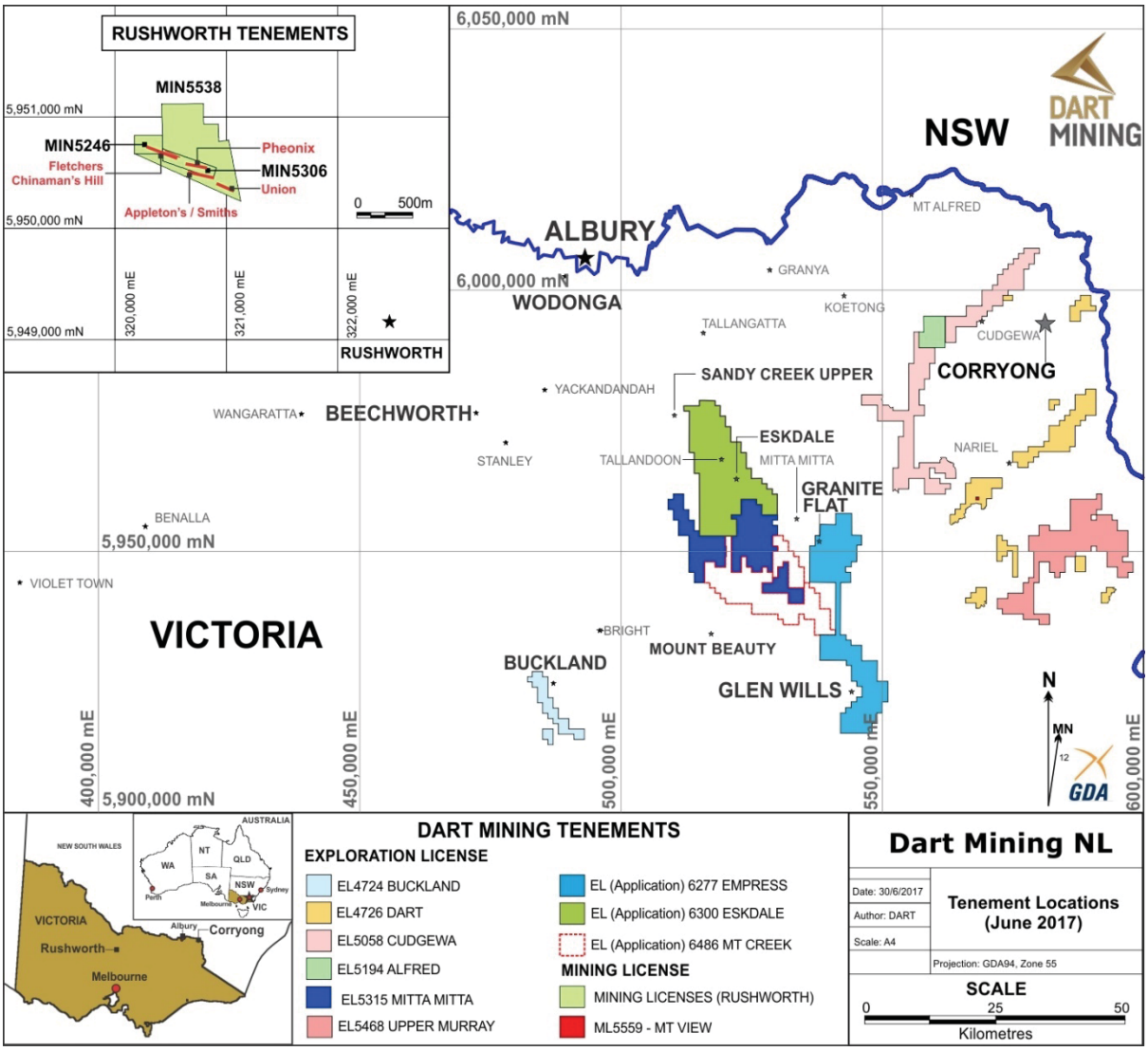

Figure 2. Location map and tenements locations.

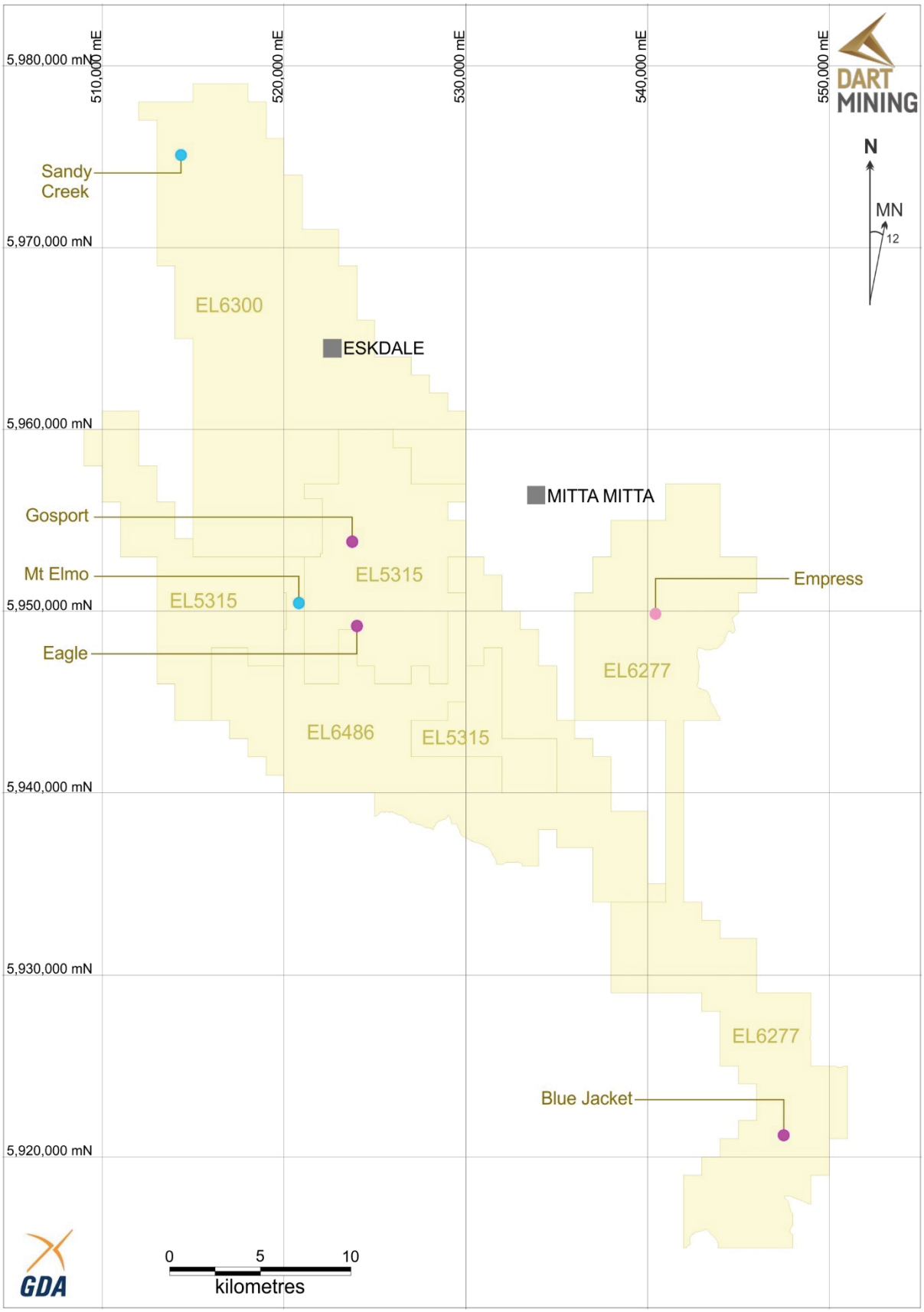

Figure 3. Prospects and tenements in the Eskdale area. Purple are LCT pegmatite prospects, pink are porphyry prospects and blue are orogenic gold prospects.

Tenement Number	Name	Tenement Type	Area (Grats) Unless specified	Interest	Interest Post-Completion of Tenement Acquisition[5]	Location
EL4724	Buckland[2]	Exploration	40	100%		NE Victoria
EL4726	Dart[1&2]	Exploration	164	100%		NE Victoria
EL5058	Cudgewa	Exploration	216	100%		NE Victoria
EL5194	Mt. Alfred	Exploration	27	100%		NE Victoria
EL006277	Empress	Exploration	~220	100%		NE Victoria
EL006300	Eskdale[3]	Exploration	~240	100%		NE Victoria
EL006486	Mt Creek	EL (Application)	~191	100%		NE Victoria
EL5468	Upper Murray	Exploration	148	100%		NE Victoria
ML5559	Mt View[2]	Mining	4.8 Ha	100%		NE Victoria
EL5315	Mitta Mitta[4]	Exploration	195	50% JV	100%	NE Victoria
MIN5246	Chinaman's[4]	Mining	5 Ha	50% JV	100%	Central Victoria
MIN5306	Phoenix[4]	Mining	5 Ha	50% JV	100%	Central Victoria
MIN5538	Rushworth[4]	Mining	34.8 Ha	50% JV	100%	Central Victoria

Table 1. Tenement status.

NOTE 1: Unicorn Project area subject to a 2% NSR Royalty agreement with BCKP Limited (Orion Mine Finance) dated 29 April 2013.

NOTE 2: Areas subject to a 1.5% Founders NSR Royalty Agreement.

NOTE 3: Areas subject to a 1.0% NSR Royalty Agreement with Minvest Corporation Pty Ltd (See DTM ASX Release 1 June 2016).

NOTE 4: Subject to Completion of a Mining Tenement Acquisition Agreement (see Note 5 below), these areas are subject to a 0.75% Net Smelter Royalty on gold production, payable to Bruce William McLennan

NOTE 5: See Dart's ASX Announcement "Acquisition of Tenement Package" dated 6 February 2017

History

Founding geological directors, Dean Turnbull & Bernie Hochwimmer grew up prospecting in north-eastern Victoria and spent most of their early careers exploring and mining in the region. Teaming up with driller Stephen Poke they established Dart Resources and applied for prospective exploration tenements in 2002. Early work capitalised on the recently - compiled Government geochemical and geophysical data and historic research. Recognising the potential and the lack of exploration for intrusion-related mineralisation, they were attracted to these opportunities.

The exploration tenements contained several historic goldfields that had received no contemporary exploration. By the time of listing in 2007, the gold prospects were considered more attractive by the market and initial exploration focussed on these and included some good drilling results at Mountain View and Fairleys Creek. However, following some scout soil geochemical sampling, a molybdenum discovery at Unicorn was made and shortly thereafter all attention was focussed there. The remaining porphyry targets received little attention and the gold drilling results weren't followed up. The remaining gold targets were not tested or in some cases not visited. Even when a new copper discovery was made at Copper Quarry to the west of Corryong, it was not followed up for several years.

In 2013 Dart Mining announced a slow down at Unicorn stating that the key factors were looming high costs, depressed molybdenum prices and metallurgical complexity. The board sought cheap post-boom projects outside of the core tenements, thinking the existing tenements were tired and not appealing to investors. However, despite picking up a new project in central Victoria and another in New South Wales nothing was found that was considered better than Dart's own prospects. Key shareholders became concerned about Dart losing focus and removed most of the board then refocussed exploration on north-eastern Victoria. Renewed efforts at Unicorn in addition to regional exploration followed. The new directors failed to raise funds in line with the strategic plan and major shareholders organised to replace the board once more.

Tectonic setting

North-eastern Victoria lies at the convergence of several important, regional structures (**Figure 4**) at the convergence of a major volcanic arc (hosting the Molong Volcanics) and a back-arc sedimentary basin of the Lachlan Fold Belt. It was proposed in Dart's IPO that due to convergence of structures, there was opportunity for the presence of structurally-controlled high-grade and disseminated orogenic gold deposits, disseminated porphyry gold-copper deposits and RIRG precious-base metals systems.

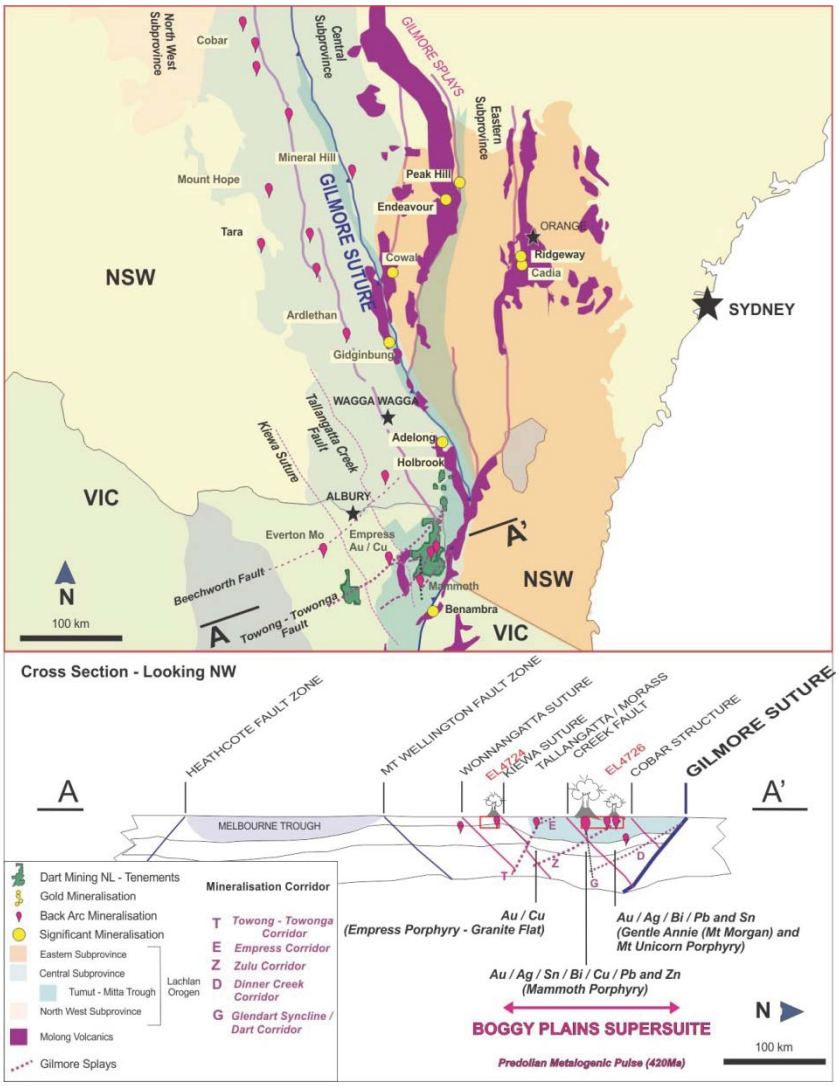

Figure 4. Tectonic setting of eastern Victorian and south-eastern New South Wales as presented in the Dart Mining prospectus (modified from Dart mining, 2007). Note the convergence of large regional faults in north-eastern Victoria.

Several large mineral deposits occur in New South Wales (Figure 4) close to the major structures. There is a large number of smaller deposits in north-eastern Victoria, possibly best considered as geochemical smoke to attract Dart's porphyry exploration.

The Geological Surveys of Victoria and News South Wales have been putting considerable effort into understanding the tectonic evolution of south-eastern Australia with the aid of new geophysical data. Significance has been placed in magnetic trends extending northwards from western Victoria into New South Wales and turning to the east before abruptly terminating at the Kiewa Fault (Figure 5). This is interpreted by Cayley (2014) to be a folded mountain belt (orocline). The Kiewa Fault separates the western zone with the large oroclinal feature from the Macquarie Arc to the east (Figure 6). A potential analogy for the Macquarie Arc is the modern Scotia Arc where rollback of subducting crust results in migration of the oroclinal feature. The Macquarie Arc is host to significant mineral deposits in New South Wales. The Macquarie Arc in eastern Victoria is in a favourable tectonic setting with the potential to be rich in base metal deposits (Cayley, 2014).

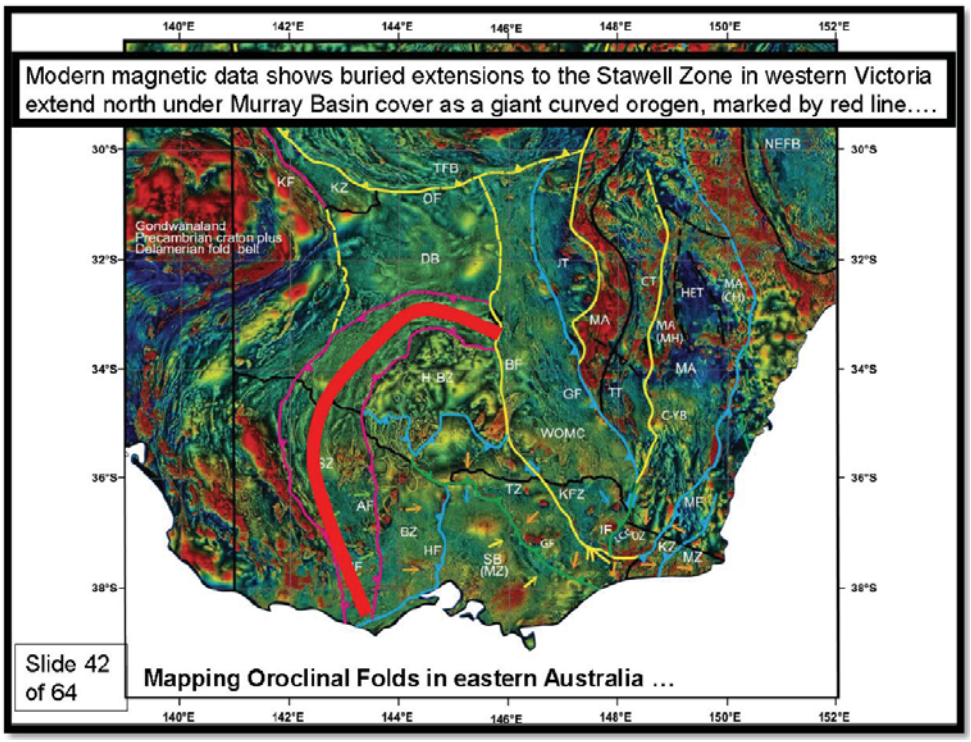

Figure 5. Recent interpretation of magnetic data (Cayley, 2014) showing the Kiewa Fault Zone truncating a major oroclinal fold (red).

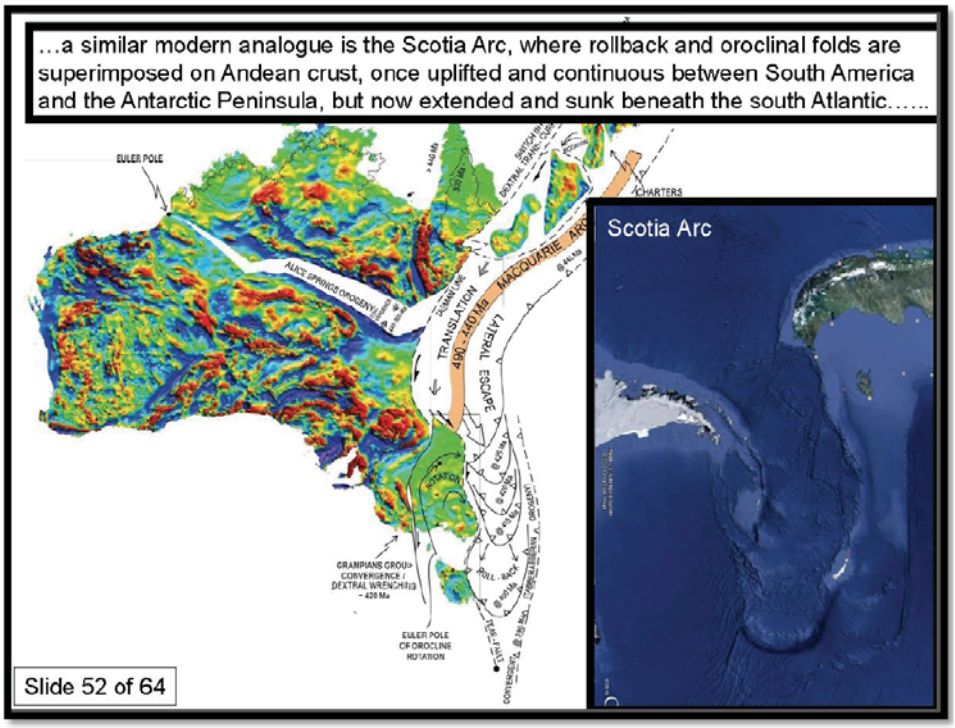

Figure 6. Model depicting the tectonic evolution of eastern Australia and analogy of the modern Scotia Arc (Cayley, 2014).

Polygonal Vortex Model (PVM)

Dart Mining geologists developed the PVM that delineated favourable zones in which to focus exploration (Hochwimmer, 2004). The PVM hypothesis initially began as a potential fractal fluid model to define the spatial distribution of mineralisation in north-eastern Victoria in the early 1990's. Whilst mining at Mountain View Bernie Hochwimmer noted regional 'polygonal' mineralisation geometries on regular fracture sets.

Initial focus was on cross-terrane structures where they intersected major parallel to suture-braided structures. These were indicative of extensional tectonics and associated with topographic ridges and geochemical provenance zones indicative of mineralisation corridors. An example is the Zulu Corridor centred on the Saltpetre Shear Zone hosting the polymetallic Mammoth Porphyry. These corridors were considered 'vortices' of fluid flux equivalent to a mineral field, hence prospective for exploration.

The PVM has since developed into an integrated metallogenic model with diverse elements encompassing geological, crustal and tectonic evolution. The PVM goal is to sufficiently explain mineralisation, geometallurgy and metallogenic domains of economic significance and explain variation at various scales from deposit to regional scale.

The PVM provided greater confidence in the selection of Unicorn and Morgan as the first porphyry targets for geochemical testing in 2008. With the renewed regional exploration in recent years, numerous targets have been tested that lie within the corridors, most notably the Empress Corridor. Recent discoveries at Staceys and Gentle Annie are within the intersecting Zulu and Empress Corridors.

Mineralisation Systems in Northern Victoria

There are five key known mineralising systems within and adjacent to Dart Mining's tenements:

1. Intrusion-related - Porphyry/reduced intrusion-related gold (RIRG): Several discoveries by Dart Mining are variably Mo, Cu, Zn, Ag, Au mineralised intrusion-related deposits (hereafter referred to as Porphyry deposits)
2. Intrusion-related – Dyke: including historic tin mineralisation and recently discovered Lithium–Caesium–Tantalum (LCT) pegmatite dykes (hereafter referred to as LCT pegmatite deposits)
3. Orogenic gold: Typically nuggetty, narrow quartz reef-, fault-, shear- or dyke-hosted gold deposits. Some have disseminated gold in sulphides.
4. VMS: Several Zn-Cu deposits occur to the southeast and northeast of Dart's tenements, notably those at Benambra. While there is some potential for such mineralisation within Dart's tenements, it has not been proven.
5. Alluvial: Numerous alluvial fields, especially in the Buckland tenement have been extensively mined. Some historic alluvial tin mines occur within the tenements.

This report focuses on LCT pegmatite mineralisation.

LCT pegmatite deposits

Dart Mining initially sought RIRG deposits within its tenements and soon found polymetallic porphyry deposits. Exploration and development of these deposits gave Dart Mining geologists a good knowledge of the area and mineralisation styles.

Vacant exploration ground over Granite Flat (Empress Au-Cu porphyry) recently became available allowing Dart Mining to not only place an application over Granite Flat but to include the Li- Sn-Ta pegmatite dykes that are known to occur in the Glen Wills area (Eagle et al., 2015). This led to the acquisition of new ground to secure the Dorchap Dyke Swarm with potential for LCT pegmatite mineralisation as well as porphyry and orogenic gold. The current tenement package provides coverage over the LCT dykes mapped by the Geological Survey of Victoria (*Figure 7*). The Empress Corridor (later renamed the Unicorn – Morgan Corridor) was originally named after the Empress workings at Granite Flat and Dart Mining have been keen to explore there since listing.

Detailed mapping of the dykes at Eskdale has been compiled by Whitelaw et al., (1915) and appended by Cuffley (1978) and is shown in Figure 8. A total of 1480 dykes and 73 reefs were mapped by Whitelaw et al., (1915) an additional 367 dykes and 36 reefs mapped by Cuffley (1978) are outside the area of the Whitelaw et al., (1915) mapping. Note that much of the mapping in these figures has come from roadside traverses only and that many dykes have not been followed significant distances from the roads. Mapped dykes range from 0.3 to 60 m wide and reach several kilometres long, recent mapping by Dart Mining has shown dykes up to 60m in width (Eagle Dyke). The district was described to be "virtually 'saturated' with pegmatite dykes" (Essex Minerals, 1978). Historic mining for gold focussed on intersection sites between quartz reefs and dykes near Eskdale and Mitta Mitta. Numerous small historic tin mines were at Eskdale and Glen Wills. Some Ta exploration has occurred near Eskdale (Garratt, 1980). However, no systematic exploration for Li has occurred in the pegmatites dykes. Lithium minerals were first documented in the dykes at the southern end of the Dorchap Dyke Swarm (Blue Jacket and Knocker dykes) in 2009 (Eagle et al., 2009).

Government mapping (*Figure 7*) includes the pegmatite dykes of Whitelaw et al. (1915). However, the remainder of the area is mostly dykes interpreted from magnetics data, i.e. mafic dykes. The abundance of pegmatites outside the mapping shown in *Figure 7* is unknown. Dyke magmatic groups were delineated by Maher & Morand (2003) for the Bogong 1:100,000 map sheet area encompassing Glen Wills and Mitta Mitta.

The mineralisation model used to target Ta-Li mineralisation is by Cerny (1991, Figure *9*). Volatile elements crystallise in distal pegmatite dykes away from the intrusion. Exploration will focus in the outer (LCT) zones and away from the high grade metamorphic rocks that host barren dykes (Maher & Morand, 2003).

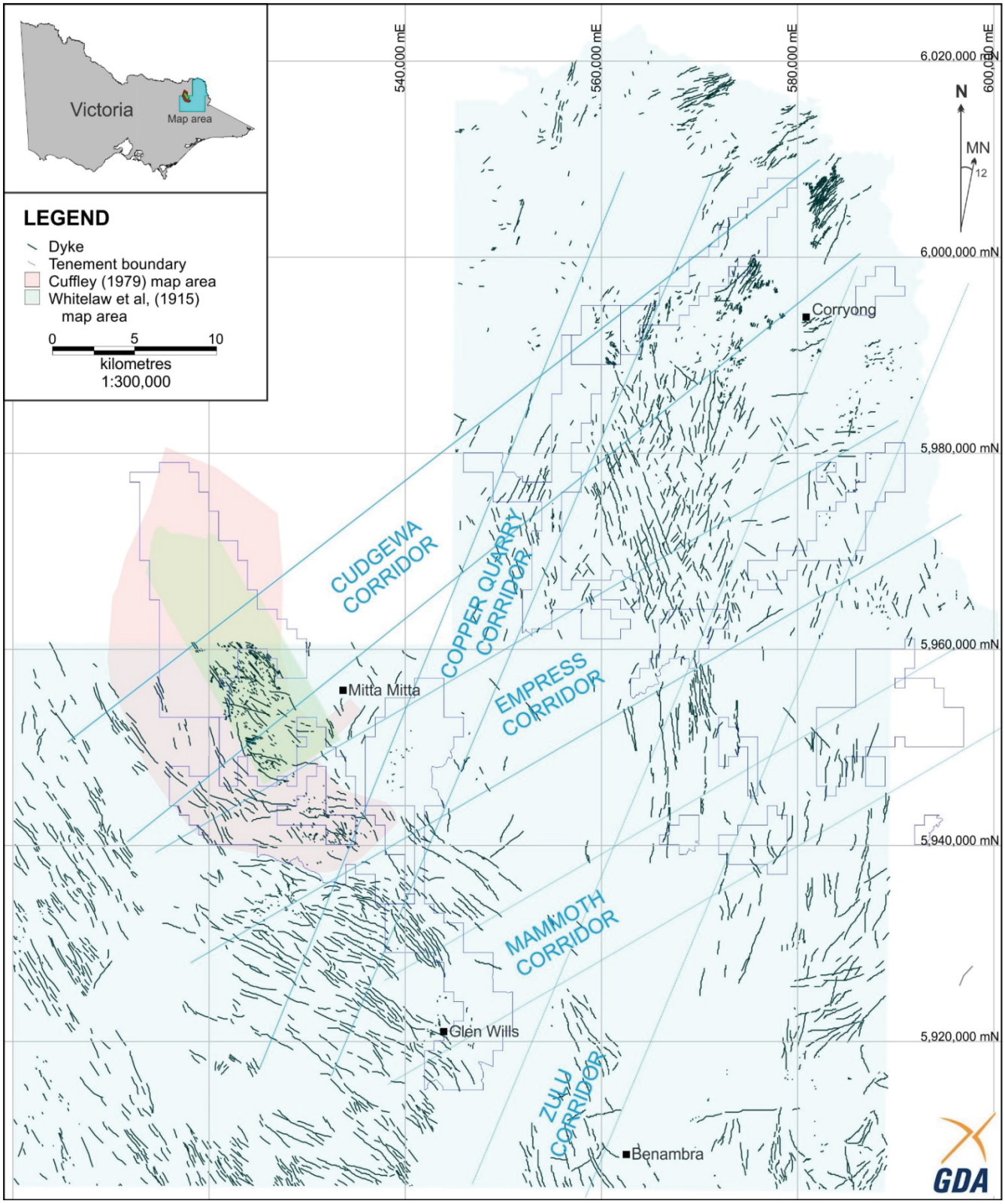

Figure 7. Dart Mining tenements, mineral corridors and dykes mapped by the Geological Survey of Victoria in the area in blue.

Dart Mining NL (Dart) is the first to explore the Dorchap Dyke Swarm for its lithium potential and to report spodumene within pegmatites along the northern end of the swarm near Mitta Mitta (*Figure 7*). Spodumene is recognised as the primary source of hard rock lithium ore worldwide and will be the initial focus of exploration work at the northern end of the swarm. The identification of spodumene in the north and lepidolite (lithium mica) and lithium phosphates at the south end of the swarm (over 50kms long) signifies a new lithium pegmatite province of significant size. Dart holds a commanding tenement position over the newly recognised province with exploration results starting to illustrate both the size and potential of the find (*Figure 7*).

Dart first reported the discovery of lithium mineralisation from the southern end of the Dorchap Dyke Swarm at Glen Wills (See DTM ASX 9 August 2016) with two grab samples taken at the Blue Jacket Dyke showing results of up to 1.57% (Li_2O) and 1172ppm tantalum oxide (Ta_2O_5). Further results were reported (ASX 3 April 2017) from limited grab and rock chip sampling along the northern end of the dyke swarm (27 samples from 13 individual dykes) with up to 4m @ 1.13% (Li_2O) and 56.4ppm tantalum oxide (Ta_2O_5) at the Gosport dyke group – Eskdale (**Figure 8**). The identification of spodumene by XRD in all 7 dyke samples submitted for analysis from the northern end of the swarm has prompted the focus of initial regional exploration along the northern 40km section (**Figure 8**).

The recently completed regional dyke geochemistry program at the northern end of the swarm was designed to gather trace element data only, not all dyke samples were submitted for analysis across each traverse with the sampling focused on capturing the range of granitic to pegmatite dominant dykes from west to east along each roadside traverse. By using the trace element (fractionation) data from the regional geochemistry program, Dart have rapidly and cost effectively focused the initial search area down from 600km^2 to 240km^2 along the northern Dorchap swarm (*Figure 7*, **Figure 8** and **Figure 11**). The fractionation target represents the most highly prospective area for lithium, tin and tantalum mineralisation but does not rule out lithium dykes occurring outside this area. Individual dykes within the target zone are now being systematically tested.

Regional pegmatite geochemistry

The major focus of field work has been the continuation of regional roadside geochemical sampling. The aim of this work was to use predictable variations in trace element composition within the dyke swarm at a regional scale to provide an exploration vector to the most prospective regions within the 600 km^2 northern end of the Dorchap Dyke Swarm (some 40km by 15km in size). The sheer size of the dyke swarm and the harsh terrain means it is not time efficient or cost effective to systematically visit every dyke. The use of established trace element trends to focus exploration toward the more fractionated zones produces a far more targeted and efficient exploration program within the most highly prospective areas. At the present level of regional sampling the more fractionated dykes appear to form within an area of 240 km^2 as a belt some 20km along strike by 12km across strike (**Figure 8**; **Figure 10** and **Figure 11**). This fractionation target zone represents the more prospective area for lithium, tin and tantalum mineralisation and will be the initial focus of ongoing exploration.

To date, a total of 80 analyses across the northern end of the swarm are available. Grab and rock chip samples from approximately 60 separate dykes (out of the circa 1800 known to date) from the northern end of the Swarm have now been taken. While this still represents only a tiny

fraction of the known dykes along the swarm, the work appears to be defining a consistent fractionation trend (trace element variation at a regional scale; Figure 10, Figure 11).

The regional survey was designed to sample all dykes that intersect the forestry road network across the full width of the swarm (Figure 11) as four east / west road traverses (across the strike of the dyke swarm). These traverses take in the granitic dominant dykes (lithium poor) along the western margin of the swarm out to the east toward the more fractionated (prospective) dykes. This systematic sampling approach provides the full range of dyke geochemistry required to establish any fractionation trend and a possible vector toward areas having dykes of higher lithium mineralisation potential. Generally only one sample is taken from each dyke using a rapid grab sampling technique (where 2 to 5 kilogram of rock chips are randomly gathered from a very limited extent of the outcrop ~ 5m in diameter). The samples are not considered to be representative of the individual dykes' mineralisation potential but are adequate to identify the dykes trace element signature at a regional scale. Due to the large number of dykes within each of the four sample traverses, not all dykes sampled were submitted for analysis.

The regional sampling program has provided further confidence in the fractionation trend that was evident from the limited previous sample data set (ASX 3 April 2017). The trace element assay data define a fractionation trend line showing generally increasing fractionation from west to east (Figure 10 and Figure 11). Fractionation is defined by the ratio of key elements Rubidium (Rb) and Caesium (Cs) against Potassium (K) and is a very useful pegmatite exploration tool. While trace element ratio data form the small grab and chip samples does not show a perfect correlation between fractionation index and lithium levels, the general trend does show a positive relationship useful in focusing exploration.

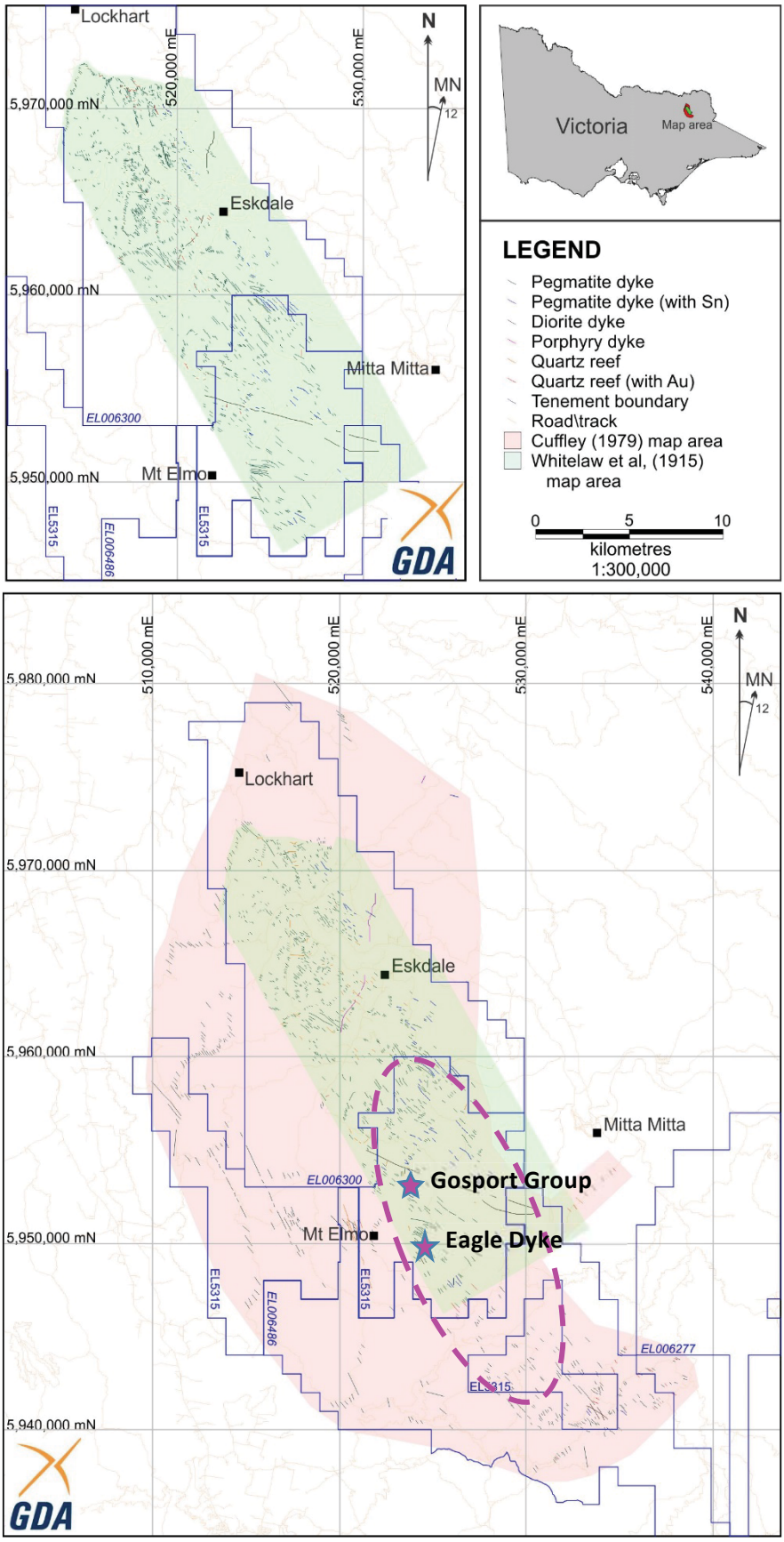

Figure 8. Dykes mapped by Whitelaw et al. (1915) and Cuffley (1978) for the Mitta Mitta-Eskdale area showing the fractionation target zone (broken line) defined through regional pegmatite geochemistry.

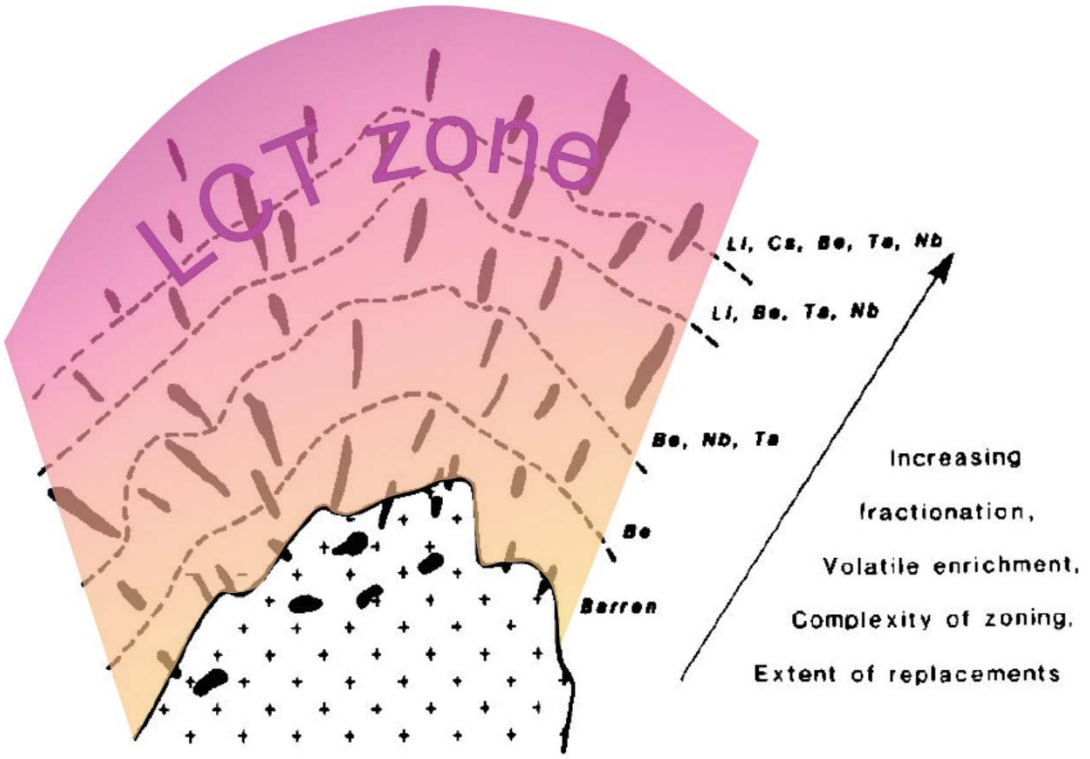

Figure 9. Model of fractionated mineralisation in pegmatites (Cerny, 1991). Dart Mining exploration will focus in the outer areas of high Li-Cs-Ta (LCT zone)

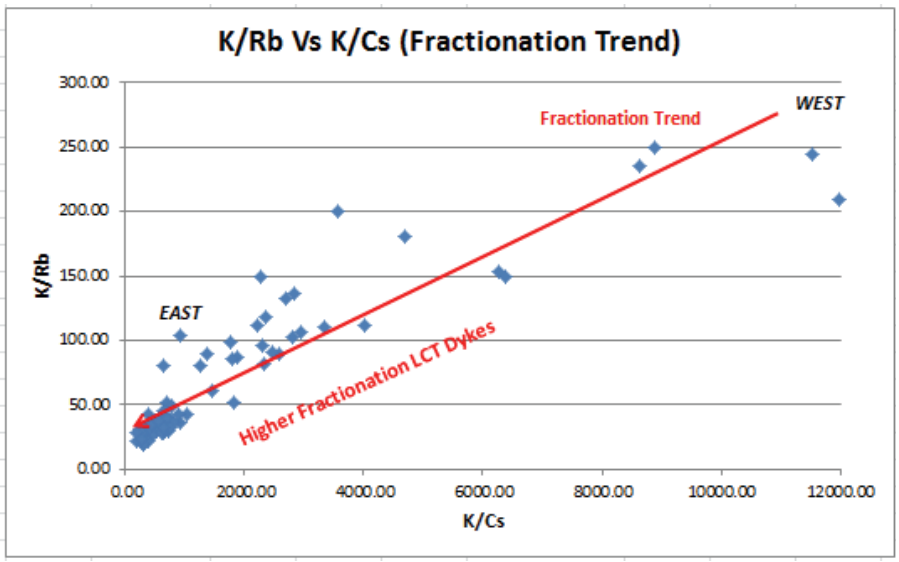

Figure 10. Fractionation Trend line – Approximately 60 Pegmatite dykes (northern Dorchap Dyke Swarm).

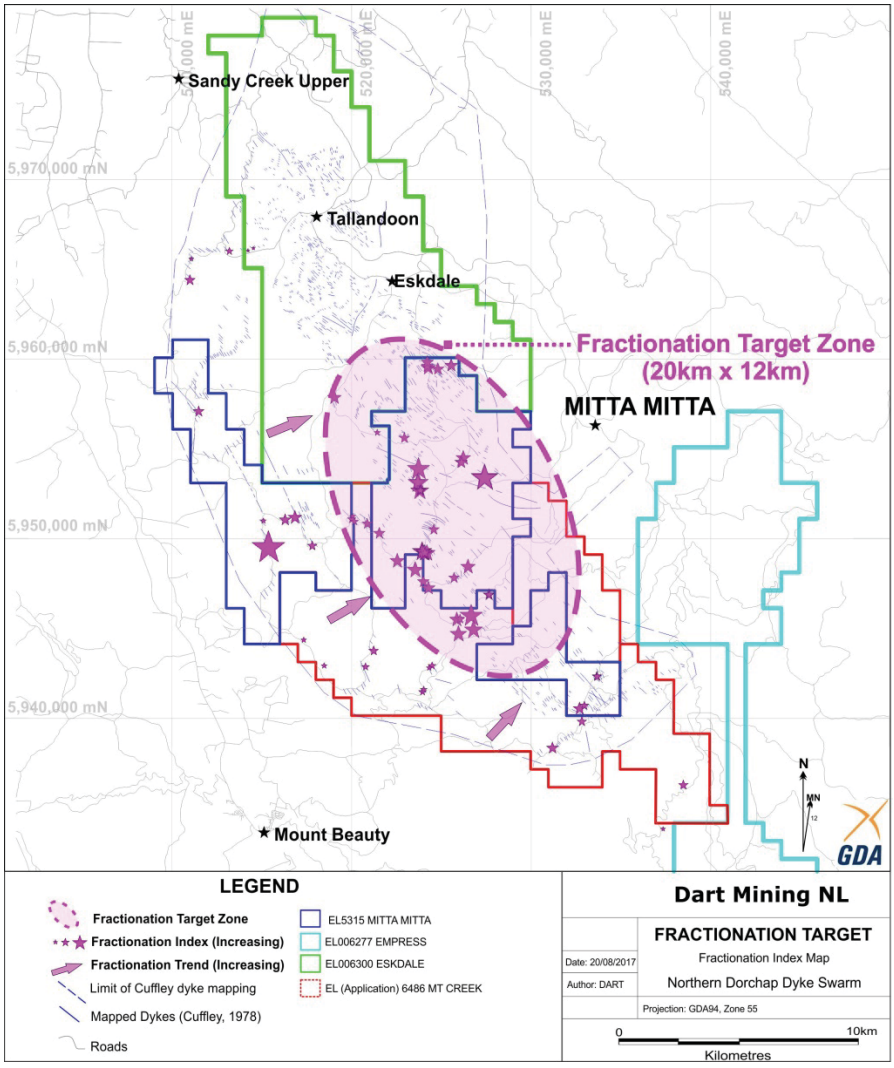

Figure 11. Graduated symbol map of fractionation index (Ratio of K/Rb over K/Cs), northern Dorchap Dyke Swarm, larger symbols represent higher degree of fractionation, more prospective for Li, Sn and Ta. Total of 60 dykes sampled to date.

Planned lithium exploration

Initial exploration will be focused on the spodumene bearing dykes along the northern end of the Dorchap Dyke Swarm, south of Eskdale. The area under exploration is further targeted within an area of some 240km^2, identified through regional fractionation studies. This Fractionation Target Zone (Figure 10 and Figure 11) will be subject to systematic exploration from reconnaissance rock chip sampling and mapping to drill target generation.

The limited sampling of dykes within the fractionation target zone along the northern extent of the swarm has already returned exciting early results that warrant follow up. The targeted program ahead seeks to rank the potential of each dyke target within the focus zone prior to detailed follow up at the most prospective sites.

Prospects and prospectivity – LCT pegmatite projects

Eskdale/Mitta Mitta Li – Sn –Ta Pegmatite Dykes

Location & access	14 km NW of Mitta Mitta, 40 km NE of Bright & 65 km SW of Corryong, access off the Omeo Highway
Deposit type	Stanniferous pegmatite dykes were mapped over the 25 km length (Whitelaw et al., 1915, Figure 8) map area, but are most prolific in the Eskdale area. Ta & Nb is associated with some of the dykes. The dykes are considered prospective for LCT mineralisation.
Geology	Mineralised pegmatites are hosted by the Omeo Metamorphic Complex. Metamorphic grade increases to upper Amphibolite facies to the west. Mineralised dykes are in the lower metamorphic grade zones.
Previous mining	Historically mined for Sn in a series of small mines along the pegmatite dykes (Figure *12*). Some small historic mines for gold in quartz reefs.
Previous exploration	Licences have been held my numerous companies since the 1960's including EL1 by Vam Ltd. Exploration has variably been conducted for alluvial gold in the Mitta Mitta River or for Sn, Ta, and Nb in the pegmatite dykes. However, typically very little work has been done, for example between 1999 and 2008 AusWex Pty Ltd (EL4378) submitted 4 float/rock chip samples for analysis.
Discovery history	Numerous Sn-bearing dykes and Au-bearing reefs are known in the area (Figure 8). No specific exploration has been conducted for Li.
Footprint	Dykes extend for over 25 km (Whitelaw et al., 1915). The main zone of mined Sn-bearing dykes at Eskdale occurs over an area of 13 x 3 km.
Dart field mapping	None
Dart geochemistry	None
Dart drilling	None
Drilling highlights	None
Resource	None
Project status	Selected as a potential Li project for Dart Mining, there has been no specific exploration for Li in the past. Numerous prospective pegmatite dykes occur and require field assessment by Dart Mining Geologists.
Required work	Field mapping, soil & rock chip geochemistry, drilling

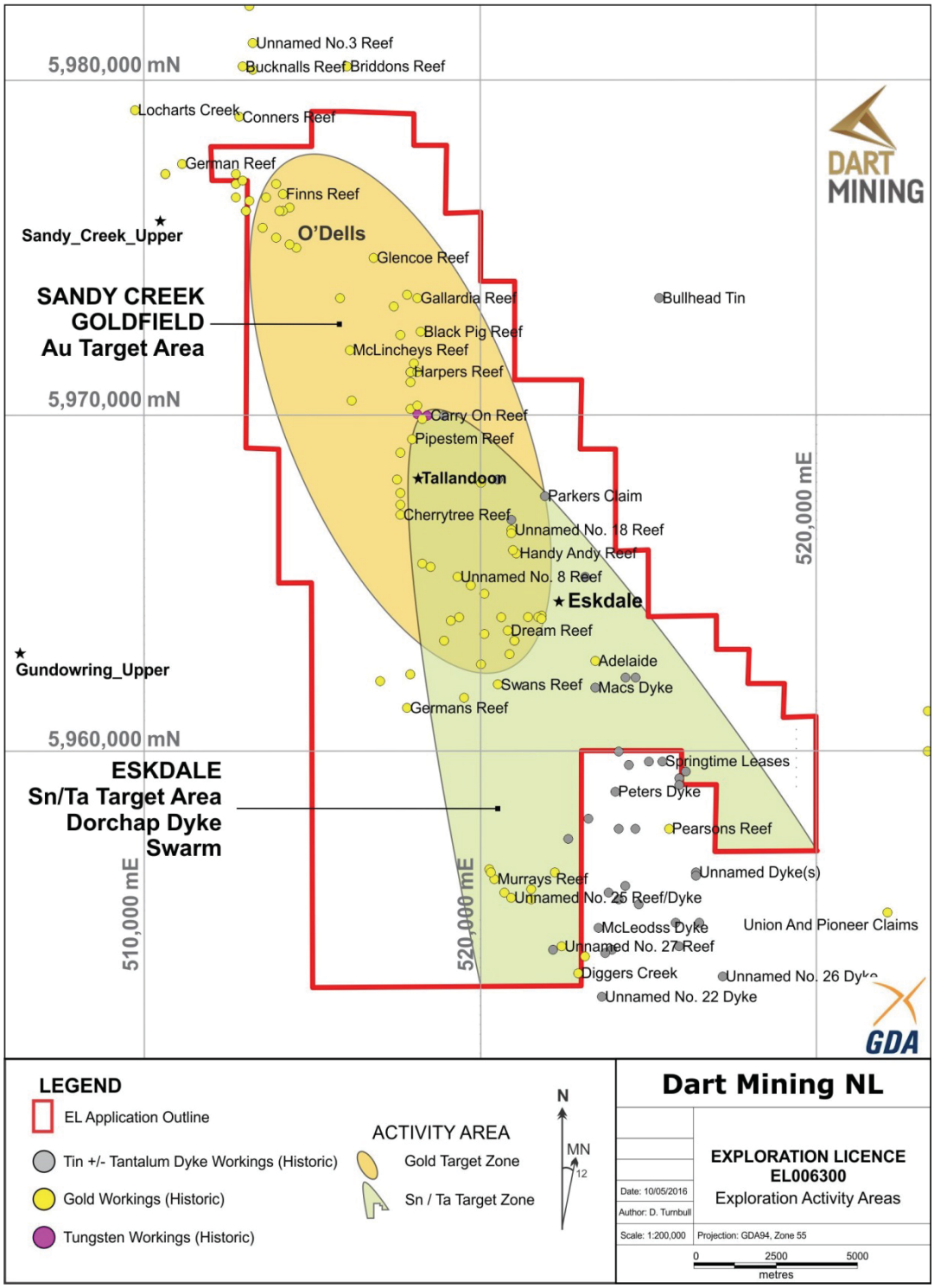

Figure 12. Distribution of historic workings, EL006300.

Eagle Pegmatite Dyke

Location & access	15 km SSE of Eskdale, access off Dorchap Range Track.
Deposit type	LCT (lithium-bearing) and tin-bearing pegmatites
Geology	Pegmatite dykes intruding the Ordovician Omeo Metamorphic Complex.
Previous mining	None
Previous exploration	None
Discovery history	Mapped by Whitelaw et al 1915
Footprint	200 x 60m (open)
Dart field mapping	Reconnaissance
Dart geochemistry	Minor chip / grab sampling
Dart drilling	None
Drilling highlights	None
Resource	None
Project status	Active exploration
Required work	Systematic sampling

The Eagle Dyke (Figure 8 and Figure 13) occurs within the fractionation target zone defined during recent regional geochemical sampling. The dyke has been mapped showing the outcrop extends to over 200m in strike length and up to a width of 60m. The continuation of the dyke both to the south east and north west is obscured by soil cover and its true extent is yet to be determined - Figure 13. A duplicate chip sample was taken across the original roadside chip sample traverse to test for lithium assay variability. The original sample returned 10m @ 0.94% Li_2O (4350ppm Li) and the duplicate sample returned 10m @ 0.95% Li_2O (4430ppm Li). This level of sample repeatability is indicative of finely disseminated spodumene mineralisation, however more duplicate sampling and petrographic work is required to understand spodumene grain size variability. Limited microscopic examination of the dyke at the sample location shows fine spodumene crystals within the pegmatite. A series of grab samples have also been collected from the contact of the dyke with the sediment host (Figure 13) to further investigate lithium mineral species crystal size and any variability over the strike length of the dyke. It should be noted that assay results from small samples such as 2 – 10kg chip samples are unlikely to be highly representative of the average dyke material.

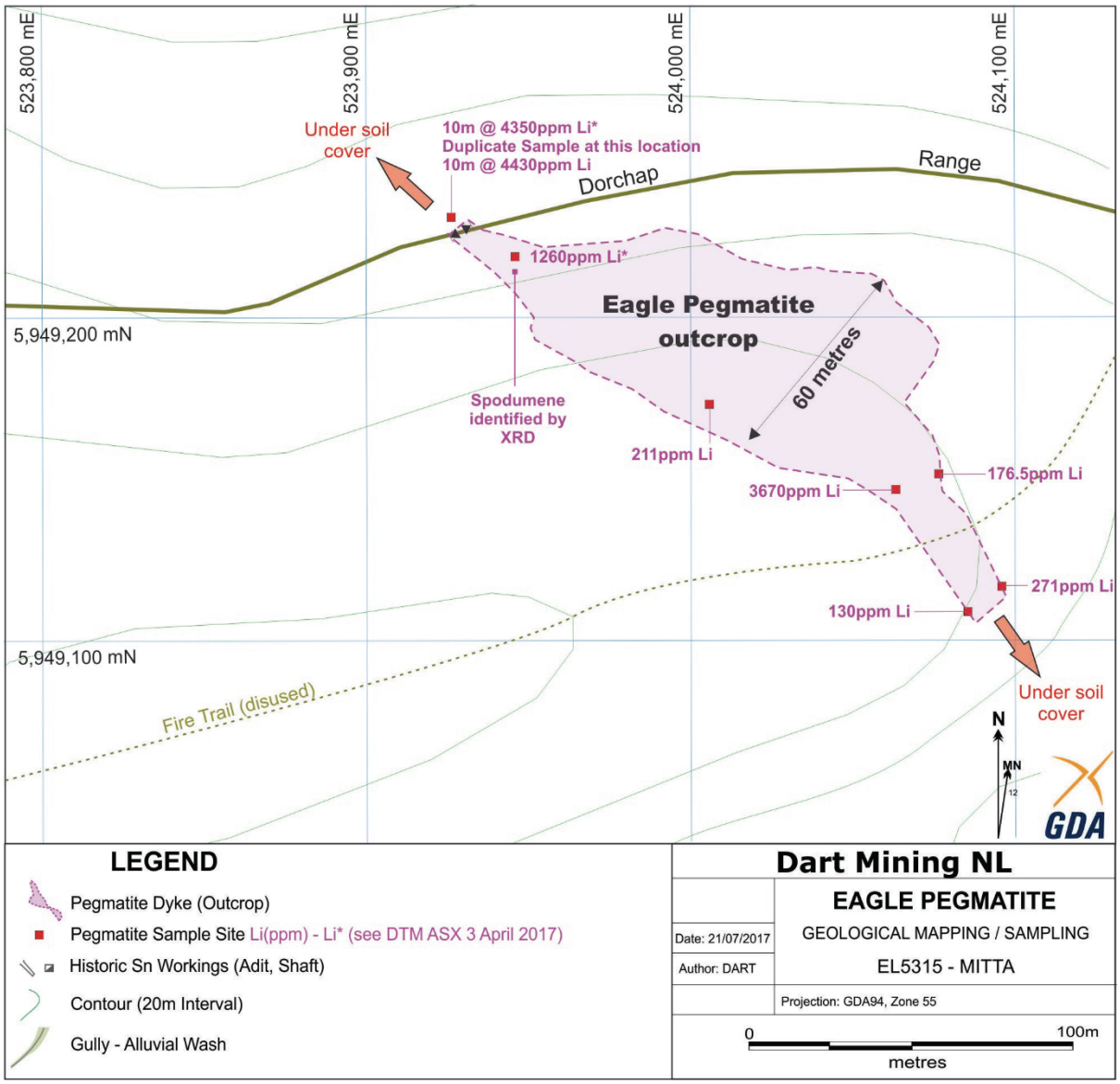

Figure 13. Reconnaissance geological mapping and sampling – Eagle Pegmatite Dyke.

Gosport Pegmatite Dykes

Location & access	12 km SSE of Eskdale, access off Dorchap Range Track.
Deposit type	LCT (lithium-bearing) and tin-bearing pegmatites
Geology	Pegmatite dykes intruding the Ordovician Omeo Metamorphic Complex.
Previous mining	Minor tin prospecting and mining – 1880's
Previous exploration	BHP chip sampling for Sn and Ta (EL 750) 1982
Discovery history	Mapped by Whitelaw et al 1915
Footprint	Unknown
Dart field mapping	Yes
Dart geochemistry	Minor chip / grab sampling
Dart drilling	None
Drilling highlights	None
Resource	None
Project status	Active exploration
Required work	Systematic sampling

The Gosport Group of dykes occur within the fractionation target zone (Figure 8) and consist of a number of named and un-named pegmatite dykes, historically prospected and mined for tin. Dart reported (ASX 3 April 2017) analyses from chip sampling showing up to 4m @ 1.13% Li_2O and have now carried out additional grab sampling from the Gosport # 3 dyke group with assays showing up to 1.28% Li_2O associated with tin workings. The Gosport group of dykes requires further mapping and systematic sampling as part of the targeted program now adopted.

Glen Wills Sn-Ta-Li Pegmatite Dykes

Location & access	37 km SSE of Mitta Mitta, 50 km ESE of Bright & 80 km SSW of Corryong, access off the Omeo Highway (Figure 14).
Deposit type	LCT (lithium-bearing) and tin-bearing pegmatites
Geology	Pegmatite dykes intruding the Ordovician Omeo Metamorphic Complex.
Previous mining	Historic small scale mining for tin and silver
Previous exploration	Most of the contemporary exploration has focussed on re-opening the Glen Wills gold mines. There has been some historical mining and exploration for tin. The more modern tenements have been large and exploration focussed elsewhere for VMS (Benambra-style) deposits. During field mapping, the pegmatites were mapped (Wright, 1982) and interpreted as vertical dykes above a cupola adjacent to outcropping granites (Figure 15) and flagging the potential for porphyry mineralisation. Li-bearing minerals have been identified in the pegmatites (Figure 16; Eagle et al., 2015)
Discovery history	Tin was first discovered at Mt Wills in 1887 but tin mining soon gave way to gold mining once the reefs were found. Gold mining on the Glen Wills gold field continued sporadically into the 1950's.
Footprint	Dykes extend for hundreds of metres. The Blue Jacket reaches 20 m wide and over 250 m long (Figure 17). Tonnages and grades and overall LCT potential are presently being assessed.
Dart field mapping	None
Dart geochemistry	None
Dart drilling	None
Drilling highlights	None
Resource	None
Project status	Field investigations have revealed lithium-bearing minerals. An assessment by Dart Mining geologists is underway.
Required work	Dart Mining is planning mapping, geochemistry and drilling for economic assessment.

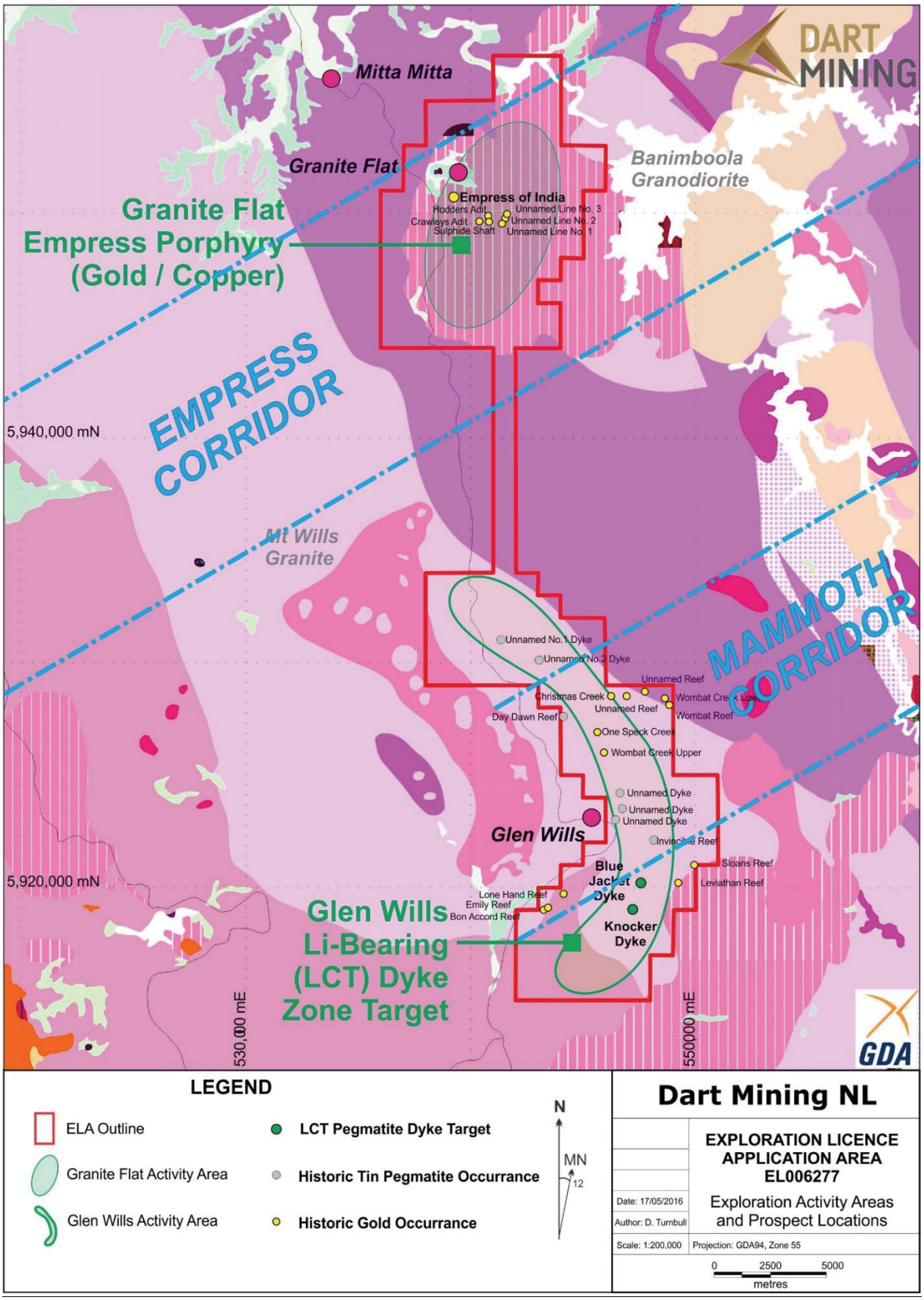

Figure 14. Dart Mining EL006277 over the Glen Wills lithium-bearing dyke zone and Empress Porphyry.

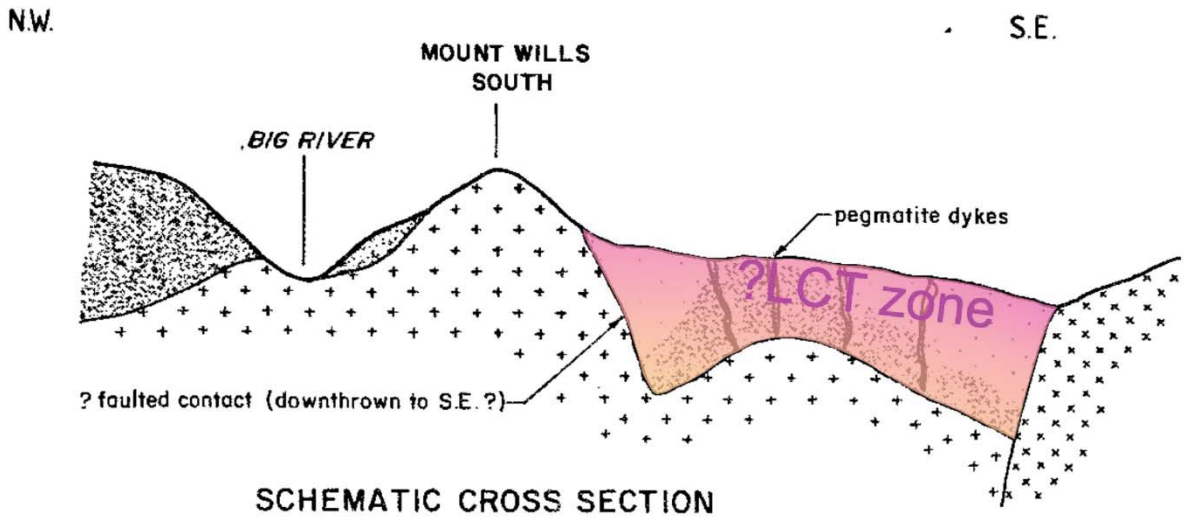

Figure 15. Schematic model of pegmatites above a cupola adjacent to outcropping granites in the vicinity of Dart's EL006277. (Wright, 1982).

Blue Jacket Pegmatite Dykes

Location & access	5 km SE of Glen Wills township, access off Knocker Track.
Deposit type	LCT (lithium-bearing) and tin-bearing pegmatites
Geology	Pegmatite dykes intruding the Ordovician Omeo Metamorphic Complex.
Previous mining	Minor tin prospecting and mining – 1880's
Previous exploration	None
Discovery history	Lepidolite identified by Eagle et al., 2015
Footprint	200 x 20m (open)
Dart field mapping	Yes
Dart geochemistry	Minor chip / grab sampling
Dart drilling	None
Drilling highlights	None
Resource	None
Project status	Active exploration
Required work	Systematic sampling



Figure 16. Sample containing lepidolite (Li-bearing mica, purple) from the Blue Jacket Pegmatite (Figure 14), Glen Wills. (Eagle et al., 2015).

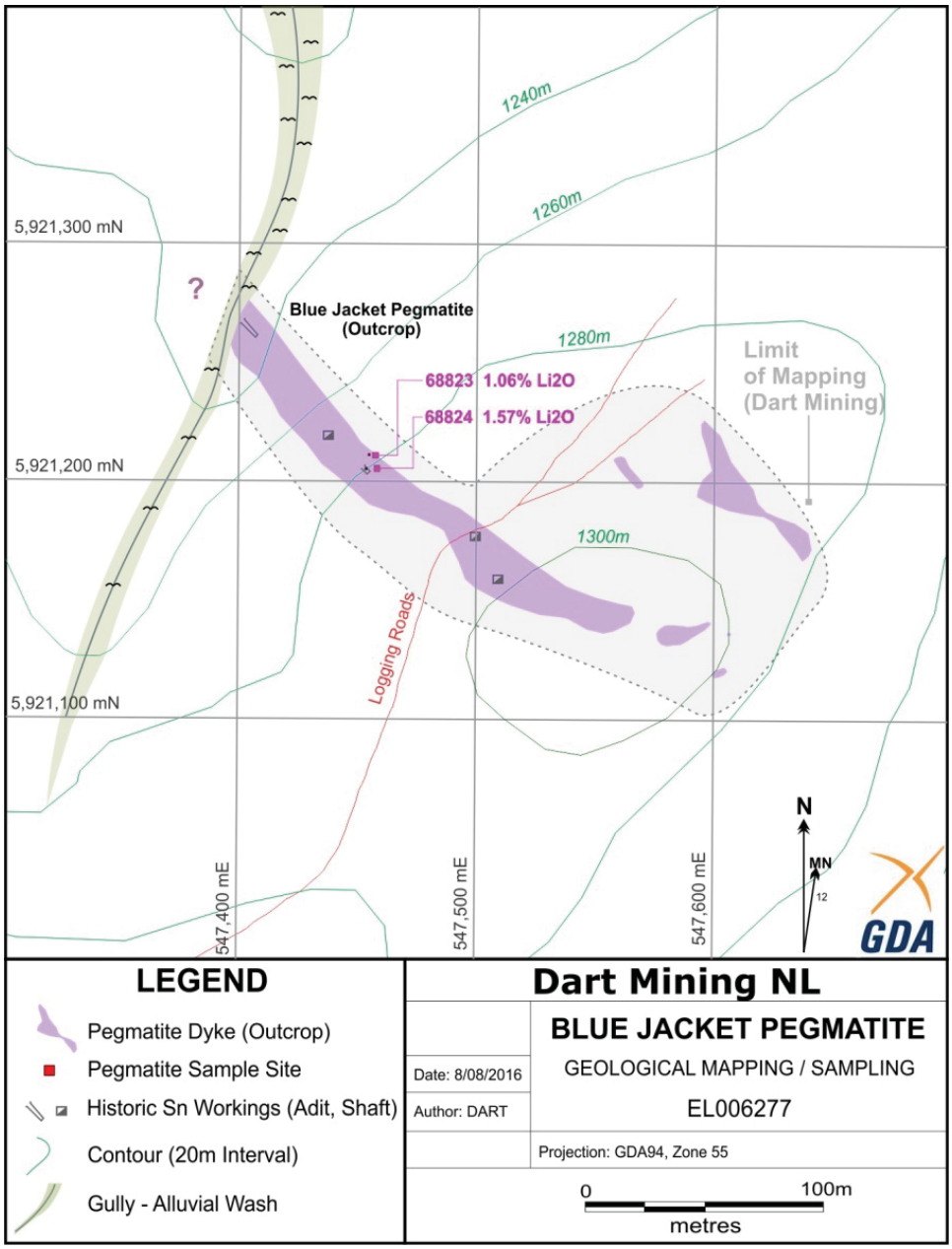

Figure 17. Field mapping, Blue Jacket Pegmatite, Glen Wills EL006277.

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